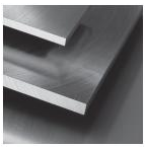
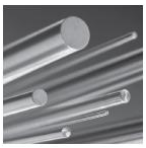
Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.4301
Description	X5CrNi18-10
AISI/SAE	304; S30400
Search for alternatives in the ABRAMS STEEL GUIDE®	**www.steel-guide.eu/alternatives/304**

Specifications



€co-Präz® [€co]
L: 500 mm



Precision round steel
without machining allowance [PRS]
bright drawn / ground, ISO h9
L: 1.000 mm

Chemical composition AISI/SAE 304 (reference value %)

C	Si	Mn	P	S	Cr	Ni	N
0 - 0,7	0 - 1,0	0 - 2,0	0 - 0,045	0 - 0,015	17,5 - 19,5	8,0 - 10,5	0 - 0,11

Physical properties

Hardness (delivery condition)	max. 215 HB, annealed				
Tensile strength R_m (as received condition)	approx. 690 N/mm²				
Working hardness	max. < 20 HRC				
Thermal expansion coefficient 10^{-6}m/(m • K)	20 - 100°C	20 - 200°C	20 - 300°C	20 - 400°C	20 - 500°C
	16,0	16,5	17,0	17,5	18,0
Thermal conductivity W/(m • K)	20 °C				
	15,0				

Technical properties

Corrosion resistant austenitic stainless chrome-nickel-steel with good processability and attractive appearance (ground-high-gloss polished). It has excellent deep drawing properties, is weldable and wear resistant but non-magnetisable and limited machining properties. Average mechanical properties.

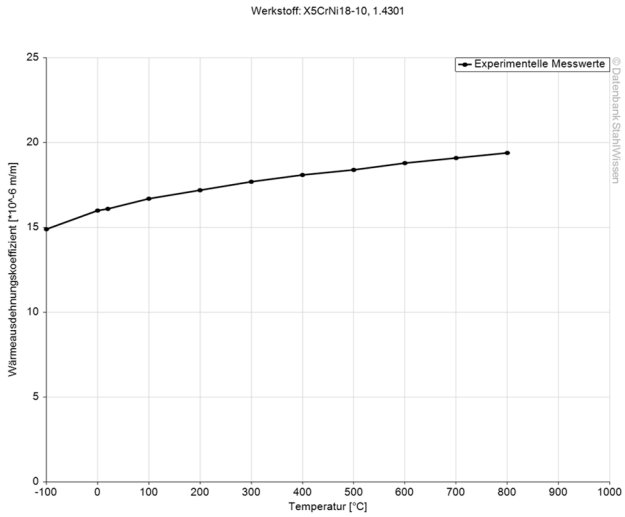
Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, machine construction, turned parts, fittings construction, kitchen equipment, decoration.

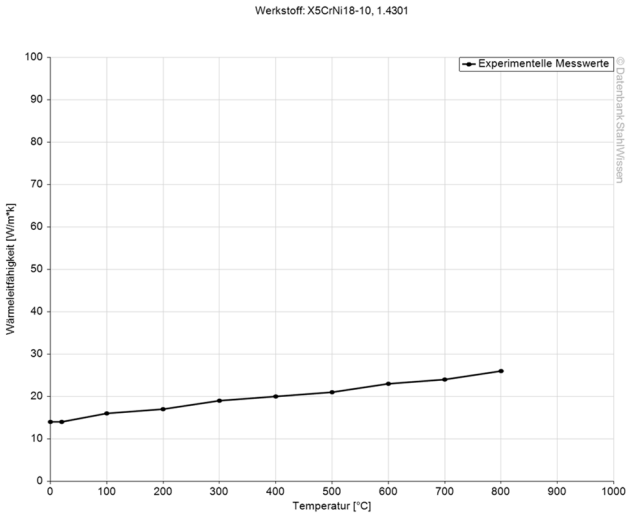
Heat treatment

	Temperature	Cooling	Hardness
Soft annealing	1000 - 1080°C	Air	max. 215 HB

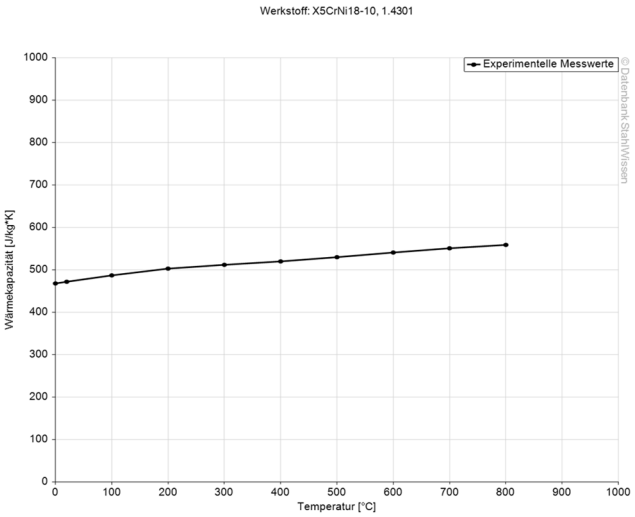
Thermal expansion coefficient diagram



Thermal conductivity diagram



Thermal capacity diagram



The data shown here is to be used only as an indication of the statistics, thus we accept no liability.
Diagrams are taken from Datenbank StahlWissen Dr. Sommer Werkstofftechnik
Issued: 2012